

# Weighing In

## How do you find perfectly weighted clubs for your swing? By Russ Ryden

In all stick and ball games, the weight of the stick is one of the first things considered when selecting equipment.

Golf is no different; the weight of your clubs is an important element of a game improvement plan. You will have a more consistent swing if your equipment fits.

There are several elements to consider – total weight, balance and dynamic weight.

### Total Weight

Generally speaking, the total weight of the club will affect the swing path. The weight of the club influences the timing of the wrist release. Consistent dynamic weights promote a consistent wrist release. The club weight must match your strength to create the feel needed for consistent ball striking.

### Balance and the Swing Weight Scale

Balance is often overlooked and more often misunderstood. The traditional measurement of balance is the Swing Weight scale. Created by Robert Adams in Massachusetts in the 1920s, it became the standard measure of golf club balance.

The Swing Weight scale measures balance only. With the Swing Weight apparatus, small changes in grip weight change the reading. These changes have no effect on the effort it takes to swing a golf club, thus the measurement does not reflect the true balance of the club.

### Dynamic Weight – Moment of Inertia

Moment of Inertia (MOI), the force needed to change the angular motion of an object on an axis, has long been known as the ultimate method of defining the force to swing a golf club.



Swing Weight Scale

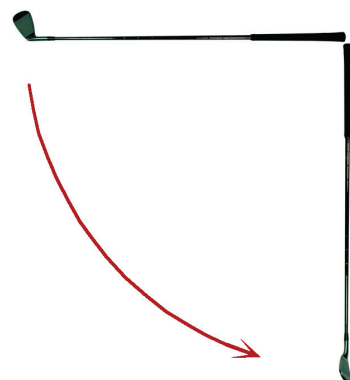


Moment of Inertia Instrument

Don't confuse MOI of the total club with MOI of a clubhead. The same formula applies, but we are looking at the MOI of the entire club. Until the dawn of the semiconductor age, MOI was a difficult measurement to take for the average clubmaker.

MOI measures both total weight and balance. Every club in an MOI-matched set takes the same force to swing. When you are properly fit into your MOI "Zone", your swing path naturally stabilizes and the clubface naturally squares at impact.

During the downswing, the golf club rotates around its axis, which roughly coincides with the wrist. MOI is a measurement of resistance to rotation around an axis. MOI-matched clubs all have the same resistance to wrist release.



## The weight of the club influences the timing of the wrist release.

### Getting Fit for Weight

MOI matching is one aspect of club weight fitting. We hear a lot these days about increasing swing speed with lighter clubs. However, head speed must get transferred to ball speed. If the club is not heavy enough, the energy transfer is not effective.

Imagine hitting a nail with a lightweight hammer versus a sledgehammer. You might not swing the sledgehammer very fast, but the nail does not know that. It reacts to the energy of the impact.

A proper fitting uses equipment that measures both head and ball speed. 3D Radar systems see both as well as the flight of both the head and the ball. When your fitter gets the weight right, your Smash Factor goes up and your swing path gets stable.



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